

**BEST AVAILABLE COPY****REMARKS**

In the Office Action dated January 21, 2005, a typographical error in claim 1 was noted, which has been corrected. Claim 4 also has been editorially amended to use terminology in the preamble consistent with the preamble terminology in all of the other claims.

Claim 1 was rejected under §112, first paragraph as failing to comply with the written description requirement, because the Examiner stated the original specification does not disclose the subject matter of "a second battery...for supplying power to said security components *only* upon an outage of said main voltage" and "a battery switchover device for switching power supply to said security components from said second battery to said first battery *only* if power from said second battery is absent."

The present specification as originally filed, at page 10, lines 13-15, explicitly states:

Given outage of the system voltage, the components are supplied only by the second battery 140, controlled by the electronic switches or by the voltage amplitude in the case of diodes. The first battery 134 is then purely as reserve for the time the second battery is replaced or in case the latter is drained.

The first sentence in this passage makes clear that the voltage supply by the second battery takes place *only* given outage of the system voltage. The second sentence makes clear that the first battery is used only (i.e. purely) as a reserve, and supplies power only if power from the second battery is absent (i.e., when the battery 140 is replaced or has become drained). Applicants are unable to determine what additional information the Examiner believes a person of ordinary skill would need in order to make, use and understand the subject matter of claim 1. If the Examiner

does not believe that the above-cited language in the original specification is sufficient to satisfy the written description requirement with regard to the designated phrases in claim 1, the Examiner is respectfully requested to indicate the additional information that the Examiner believes a person of ordinary skill would require. Without being informed by the Examiner as to why the Examiner believes the above-cited language is deficient for satisfying the written description requirement, Applicants have no basis to respond to this rejection, other than to state that the above-cited language provides clear and unambiguous support in the original specification for the designated phrases in claim 1. Withdrawal of the rejection of claim 1 for failing to satisfy the written description requirement of 35 U.S.C. §112, first paragraph is therefore respectfully requested.

Claims 1, 5-8, 12 and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Davies, Jr. et al. in view of Ryan, Jr. et al. and Fang et al. Claims 2 and 3 were rejected under 35 U.S.C. §103(a) as unpatentable over this combination, further in view of Wiley et al. Claims 9-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over the first combination, further in view of Mori et al.

Applicants note with appreciation that claim 4 was stated to be allowable if rewritten in independent form. The above rejections, however, are respectfully traversed, and therefore claim 4 has been retained in dependent form.

As stated in Applicants' previous response, neither of the Davies, Jr. et al. or the Ryan, Jr. et al. references has anything to do with providing back-up power in general, nor with regard to the specific arrangement for supplying back-up power disclosed and claimed in the present application. Therefore, the fact that the

**BEST AVAILABLE COPY**

Examiner has now additionally relied upon the teachings of the Fang et al. reference as disclosing the supply of back-up power in the event of outage of the mains voltage, does not in any way require modification of Applicants' previous arguments in support of patentability. There simply is no point of intersection between the teachings of the combination of Davies, Jr. et al./ Ryan, Jr. et al., and the teachings of the Fang et al. reference. The Fang et al. reference is merely one of thousands of references for the general purpose of providing back-up power to devices containing volatile memory information in order to prevent loss of that information upon a power outage.

As noted in Applicants' previous response, the two source of power that are provided in the Ryan, Jr. et al. reference are in no way related to providing back-up power in the event of an outage. The second source in Ryan, Jr. et al. is used only briefly when encrypted signals are being transmitted, to prevent unauthorized detection of those signals by DPA. The Ryan, Jr. et al. reference solves this problem by switching, during the brief times that the encryption circuit is actually performing encryption operations, to power by an internal capacitor C1, so that there is no accessible external line that can be monitored for the purpose of DPA. The operation of the Ryan, Jr. et al. reference in this regard is completely independent of whatever happens if and when a power outage occurs. Providing a back-up battery or other power source that becomes operational in the event of loss of mains voltage would not in any way alter the aforementioned operation of the Ryan, Jr. et al. reference, because the Ryan, Jr. et al. reference makes use of the alternative power source exclusively for preventing DPA. There simply is no relationship whatsoever between preventing DPA and providing back-up power in the event of an outage.

BEST AVAILABLE COPY

In paragraph 13 at page 5 of the Office Action, the Examiner stated a person of ordinary skill in the relevant technology would be motivated to modify Davies, Jr. et al. in view of the teachings of Fang et al., "as it provides a way to conserve battery power, as well as to monitor power conditions." Applicants do not disagree that the Fang et al. reference provides general teachings that it is desirable to achieve both of those goals, however, as noted above neither of the power supplies in the Davies et al. reference has anything whatsoever to do with conserving power or monitoring power conditions. The switch from one power source to the other in the Davies, Jr. et al. reference occurs if and when the cryptographic circuit is activated, because it is only when the cryptographic circuit is activated that the risk of DPA exists. If the condition for switching from one power source to the other in Davies, Jr. et al. were instead changed, as proposed by the Examiner, to occur when a power outage happens, this would destroy the intended operation of the Ryan, Jr. et al. circuit, because then the problem of DPA would be reintroduced. It is essential to the intended operation of the Ryan, Jr. et al. circuit that the switch from one power source to another occur when the cryptographic circuit is activated, which is why it is completely irrelevant to this aspect of operation of the Ryan, Jr. et al. reference as to whether, and under what conditions, an additional back-up power supply might be used.

As also argued in Applicants' previous response, the use of the first and second batteries in the arrangement disclosed and claimed in the present application is to avoid overly-frequent replacement of the security module, which contains the first battery and which, because of its nature as a security module, must be contained in the overall apparatus in a manner that makes frequent replacement

**BEST AVAILABLE COPY**

difficult, or at least problematical. If the first battery always has to be used whenever a power outage occurs, this leads to more frequent replacement of the security module than would otherwise be necessary for reasons unrelated to battery depletion. This problem is solved by the present invention by providing the second battery outside of the security module, and using only the second battery to supply security module components when a power outage occurs. Only if power from the second battery is no longer available is power from the first battery employed. Therefore, as stated in the present specification, the first battery serves purely as a reserve for when power from the second battery is not available, and thus the first battery will have to be only infrequently employed, thereby extending its life and making replacement of the security module for that reason less frequent. In fact, as described in the present specification, the normal "lifetime" of a security module for technical reasons is approximately 12 years, and with the use of the second battery to preserve the life of the first battery it is expected that the life of the first battery will also be 12 years or more, thereby ensuring that the security module does not ever have to be replaced due to battery depletion.

This problem is not even present in any of the references relied upon by the Examiner, and therefore a person of ordinary skill in the field of security devices, seeking to solve the problem of overly-frequent replacement of an encapsulated security module, due to depletion of the battery therein, would find no teachings of solutions to that problem whatsoever in any of the references relied upon by the Examiner. The Examiner has merely used the present specification as a guideline or roadmap for combining the desperate and unrelated teachings of these three references.

**BEST AVAILABLE COPY**

Therefore, none of claims 1, 5-8, 12 or 13 would have been obvious to a person of ordinary skill in the relevant technology under the provisions of 35 U.S.C. §103(a), based on the teachings of Davies, Jr. et al., Ryan, Jr. et al. and Fang et al.

Even if the teachings of Wiley et al. and Mori et al. references noted by the Examiner are accepted, for the above reasons modification of the Davies, Jr. et al./ Ryan, Jr. et al./ Fang et al. combination still would not result in the subject matter of dependent claims 2 and 3, nor the subject matter of dependent claims 9-11. Those dependent claims, therefore, would not have been obvious to a person of ordinary skill in the relevant technology under the provisions of 35 U.S.C. §103(a) for the same reasons discussed above in connection with Independent claim 1.

This Amendment does not raise any new issues requiring further searching or consideration and therefore is properly enterable at this stage of prosecution, after the final rejection. Even if the Examiner determines that the prior art rejections should be maintained, the present Amendment still should be entered in order to allow withdrawal of the rejection under §112, first paragraph in order to reduce the issues for appeal.

Early reconsideration of the application is therefore respectfully requested.

Submitted by,

Steven H. Noll (Reg. 28,982)

SCHIFF, HARDIN LLP  
CUSTOMER NO. 26574  
Patent Department  
6600 Sears Tower  
233 South Wacker Drive  
Chicago, Illinois 60606  
Telephone: 312/258-5790  
Attorneys for Applicants.

CH11 4244957.1